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ABSTRACT

The study of pidgin and creole languages, usually emphasizing oral language codes, offers insights into language, especially as an observably dynamic phenomenon. However, channel is highly influential on the surface form of the language code. Pidgin sign language codes, not dependent on oral language codes, can serve as an ideal forum for the discussion of universality and uniqueness in pidgins and creoles. Code structure of these pidgins is relatively unexplored and the channels of the pidginized languages heavily influence surface code structure. One pidgin sign language, Pidgin Sign English (PSE), has developed out of the U.S. sociolinguistic situation of the deaf community where communication is necessary between the deaf and the hearing. PSE comes from American Sign Language (ASL), which is channeled through the manual-visual modality, and English, channeled through the oral-aural modality. Several grammatical, functional (phonological), and linguistic characteristics of PSE can be discussed, such as: (1) the progressive aspect; (2) negative incorporation; (3) agent-beneficiary directionality; (4) copula; (5) the perfective aspect; (6) articles; (7) plurality; (8) number incorporation; (9) phonology, especially suprasegmentals; (10) handshapes, places and movements; (11) the written language; (12) reduction and admixture; (13) restricted inter-group use; and (14) the relationship of these areas to a dynamic theory of pidgin and creole languages. PSE may serve the vital function of fostering development of the deaf subculture with minimal long-term cultural interference from the hearing community. (Author/MHP)

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SOME HANDY NEW IDEAS ON PIDGINS AND CREOLES: PIDGIN SIGN LANGUAGES[1]

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0.0 Introduction. The study of pidgin and creole languages has offered many insights into the nature of language, especially language as an observably dynamic phenomenon. Like most linguistic studies, pidgin and creole studies have concentrated on oral language codes. However, channel is highly influential to the surface form of the language code. Natural visual sign language codes, which are not dependent on oral language codes, have expanded our knowledge of the nature of language (Bellugi and Fischer 1972).

Likewise, pidgin sign languages can serve as an ideal forum for the discussion of universality and uniqueness in pidgins and creoles, since code structures of these pidgins are relatively unexplored and since the channels of the languages that are pidginized heavily influence surface code structure, especially in the phonological component.

This paper will concentrate on one pidgin sign language, Pidgin Sign English (PSE)[2], discussing (1.0) an overview of the language situation in the deaf community, (2.0) sociolinguistic reasons for the existence of PSE, including social functions of and attitudes

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towards PSE in the U.S. deaf community, (3.0) linguistic characteristics of PSE, especially suprasegmental problems, and (4.0) the relationship of these areas to a dynamic theory of pidgin and creole languages.

1.0 An Overview of the Language Situation in the U.S. Deaf Community.

1.1 Sign Language Diglossia. The language situation that acts as a cohesive force in the deaf community is a diglossic situation. Stokoe (1970) first pointed out the existence of diglossia in the deaf community, using Ferguson's (1959) classic paper on diglossia as a model. Stokoe defined the High (H) variety as Manual English and the Low (L) variety as American Sign Language. Manual English is a combination of signs and fingerspelling that represents a morpheme to morpheme correlation with spoken English. An example of this is:

Example 1: I went TO the STORE.[3]

"I went to the store" where "I" is signed, "went" is fingerspelled, "to" is signed, "the" is fingerspelled, and "store" is signed. All of these morphemes could be spelled; this would be what is known as the Rochester Method. American Sign Language is a language in and of itself. It has a different grammatical structure from English and has little, if any, fingerspelling. For example, English "Have you been to California?", which is Auxiliary, Subject, Verb, Locational

Prepositional Phrase, is translated into American Sign Language as:

Example 2: TOUCH FINISH CALIFORNIA YOU
QUESTION

which is Verb, Auxiliary, Locational Noun, Subject, and Question, where Subject and Question are signed simultaneously.

Stokoe, in the same article, also demonstrated that Manual English (H) and American Sign Language (L) have the sociolinguistic characteristics that languages in diglossic situations have. H is used in more formal situations with more formal topics and participants. L is used in less formal situation. H is generally felt to be superior to L by the native users, and some users will claim that L does not exist. Acquisition of L is generally in the home; acquisition of H is in the formal educational system. H is generally studied in the schools; L is not. Much formal grammatical description has been done of English (in its spoken or written form) but only relatively recently has any research on ASL been done. Some signers feel that standardization is necessary, but sign language diglossia appears as stable as other diglossic situations.

There appears to be only one possible point of conflict between diglossia in the U.S. deaf community and diglossia in hearing communities -- how the languages are acquired. In hearing diglossic situations, L is learned first at home and H at school. But less than

10% of the deaf population has deaf parents, so this can't be true for the deaf community. However, if we remember that the home is the initial locus of enculturation for hearing children and that residential schools have served as the initial locus for enculturation of many deaf children of hearing parents, this seeming problem is overcome. We can now say that L is generally learned early in the initial locus for enculturation. To the present, many of these deaf children of hearing parents have learned ASL from their peer-group deaf children, from deaf parents or from older deaf children who had already been enculturated into the deaf community. This acquisition of ASL took place in informal situations. English (signed, spoken, or written) was learned in more formal classroom situations.

The diglossic situation that Stokoe was describing is not the "classical" diglossic situation, since as Ferguson (1959) pointed out, the language varieties in diglossia that he was describing were actually varieties of the same language. However, Fishman (1967) further refined the definition of diglossia to include bilingual communities. He pointed out that it is possible to have diglossia with bilingualism, diglossia without bilingualism, bilingualism without diglossia, and neither bilingualism nor diglossia. The relationship between ASL and English is both a diglossic and bilingual situation, as is the case with Guarani and Spanish in Paraguay.

More recently, several researchers have added some new dimensions to the discussion of diglossia, namely: 1) an expansion of what language varieties may be considered H, and 2) the notion of a language continuum.

Meadow (1972) and Stokoe (1973) have pointed out that for some signers a formal variety of ASL (including or in addition to Manual English) may serve as H. While it is not known which groups of signers have a variety of ASL functioning in formal situations, we can hypothesize that these people are probably deaf, have deaf parents, and/or learned signs before the age of six (or that their closest associates have these characteristics), since Woodward (1973a, b, c, 1974) has shown that these variables are useful in predicting which people function closest to "pure" ASL in informal situations.

It is also possible that for some signers special varieties of Sign English exist for informal conversations. This would probably be true of signers who function primarily near the English end of the continuum.

1.2 The Sign-to-English Continuum. The notion of a language continuum in the deaf community has been pointed out by Stokoe (1973), Moores (1972) and Woodward (1972). Varieties of ASL were seen to be at one end of this continuum (which as Stokoe (1973) points out is probably multidimensional) and varieties of Manual English at the other. Woodward (1973d) also demonstrated that intermediate varieties along this continuum had the linguistic and sociological characteristics of

a pidgin language, and called these varieties Pidgin Sign English (PSE).

Battison, Markowicz, and Woodward (1973) and Woodward (1973a, b, c, d, 1974) have shown that variation along this continuum is non-discrete, but regular, rule-governed, and describable in terms of modified scalogram analysis (Guttman 1944, Bailey 1971, and Bickerton 1972) and variable rules (Fasold 1970, Labov 1969). This variation also correlates with gross social variables of whether a person is deaf or hearing, has deaf or hearing parents, learned signs before or after the age of six, and attended some or no college (Woodward 1973a).

2.0 Sociolinguistic Background of PSE. The formation of a deaf sub-culture resulted essentially from two patterns of behavior: the attendance of deaf children in residential schools and the use of sign language among the students (Stokoe 1965).

2.1 The Deaf Sub-Culture. Barth (1969) suggests that ethnic groups should be viewed as a form of social organization, in which membership is determined by self-identification, and identification by others. Residential schools for the deaf provide the environment in which most deaf children "begin to develop feelings of identity with the deaf group and to acquire the group attitudes which tend to set them apart." (Lunde 1960, p26) After leaving school deaf people normally

continue to associate socially with other deaf persons, both informally and through formal organizations.

Barth states that ethnic group boundaries specify patterns of behavior and social relations within a group as well as between groups which interact. Membership in the same ethnic group "implies a sharing of criteria for evaluation and judgement."(p15) On the other hand, for individuals on opposite sides of an ethnic boundary, there exist different criteria for judging values and performance, and interaction is restricted to common areas of understanding and interests. Restricted ability to communicate with hearing people thus accounts only partially for the fact that deaf people prefer the company of other members of the deaf community to that of outsiders. Membership in the deaf sub-culture is not limited to the deaf since it includes hard-of-hearing and hearing persons, such as hearing children of deaf parents (Furth 1973). In these cases it is clear that inability to communicate with hearing people is not the principal criterion for membership.

With regard to the claim that deaf people constitute an ethnic group, Meadow(1972, p20) states:

> The group definition is strengthened further with the knowledge that deaf persons are characterized by endogamous marital patterns. In the survey of the deaf population of New York State, for example, it was found that only 5 per cent of women born deaf, and about 9 per cent of women who became deaf at an early age, were married to hearing men. (Rainier et al. 1963)

It must be pointed out that not all the women in the survey were necessarily members of the deaf community, possibly reducing the percentage of marriage across an ethnic boundary even further. To illustrate the extent of group solidarity, Lunde refers to "the movement in the nineteenth century to establish a deaf-mute Utopia in the West; Congress was petitioned to set aside a state or territory for deaf-mutes only." (p27)

The first school for the deaf in the U.S. was established with Thomas H. Gallaudet as its head, in Hartford, Connecticut. Laurent Clerc, a deaf Frenchman who had been highly educated ir the Institution Nationale des Sourds-Muets in Paris, became the first teacher at the Hartford School. Here, as well as in other schools which soon made their appearance in every state, sign language served as the medium of instruction. Stokoe (1960, p13) states that the language and the schools flourished "to the point where a national college for the deaf was deemed necessary and established by Act of Congress in 1864 for the higher education of the graduates of these schools."

2.2 The Functions of Language in the Deaf Community. ASL has served three primary purposes in the deaf community: 1) communication on the inter-personal level 2) socialization into the deaf culture, and 3) identification of members of the sub-culture. In all three respects, ASL acts as a powerful cohesive force in the deaf community (Croneberg 1965, Meadow 1972, van der Lieth forthcoming).

However, in 1880, the International Conference of Teachers of the Deaf, meeting in Milan, passed the following resolution: "The congress, considering the incontestable superiority of speech over signing in restoring the deaf mute to society, and in giving him a more perfect knowledge of language, declares that the oral method ought to be preferred to that of signs for the education and instruction of the deaf and dumb." (quoted in Denmark 1973 p285) As a result, sign language was abandoned by hearing policy makers in the American schools in favor of the oral method. Nevertheless, ASL has continued to be used in the schools, but only among the students and as an underground language.

Cokely and Gawlik (1974) have shown that the language of school children differs in some regular ways from that of the adult deaf community, probably due to the limited contact between these two groups. With the exception of a very small number of deaf teachers of the deaf, deaf children of deaf parents are usually the only cultural brokers between the adults and children in the community. Upon leaving school the young deaf person joins the adults in the culture, adopting the community linguistic standards. ASL has continuously remained the language of the deaf community where its use cannot be legislated by outsiders.

The acquisition of a spoken language by an individual who is born profoundly deaf presents difficulties of such magnitude that

only a small minority has been found to achieve competence in English as demonstrated by their writing (Furth 1966). Among the deaf, competence in written English ranges from the totally incomprehensible to near Standard English. The following selection is intended to illustrate the point that the deaf have a limited knowledge of English. The passage was written by a graduate of a deaf school.

> When I was a small, deaf girl, I never talked well. I was dumb that my parents were anxious a lot. My mother really wish that I am hearing girl. When I grow up to change my age, I can talked to improve very well than ever before. My parents was so satisfied about that. Most of the time I was talking to the my parents to never sign language. I always sign language to talk to the deaf people. I must talked to the hearing people who talked to me that I cared to watch their lipreading. I understood it, but sometimes, I don't understand. Sometimes, my mother taught me how to talk any words. I was so glad that my mother helped me for it. I liked to talk very much that was very important to me. Sometimes, I tried to talk to the strange people, but some of them don't understand me that made me tired to talk again. Anyway I wrote a note to show them but I could like to talk much better than I wrote. I was tired to write.

With few exceptions, English remains a foreign language for the deaf.

2.3 Interaction between the Deaf and Hearing Communities. As stated earlier, members of the deaf community tend to associate socially within their own ethnic group. On the other hand, they have formal relations with hearing outsiders such as parents, teachers, doctors, speech therapists, counselors, psychologists, religious

workers, and employers. In spite of the fact that within the deaf community the deaf person may feel perfectly normal, frequently in these encounters he is considered as a pathological individual. His membership in a minority culture is ignored, as well as the existence of that culture with its own rich language. Instead, he is viewed as a defective hearing person.

Unfortunately for the deaf, their schools are controlled by hearing outsiders. The opposition to ASL finds some of its basis in the empirical tradition, with its contemporary manifestation in behaviorism, which equates verbal language and thinking (Markowicz 1972). A psychological explanation has been suggested by Vernon (1972) who bases the rejection of ASL on the inherent linking of signing with non-verbal communication, making the signer's deep feelings (sexuality, aggression, etc.) more transparent than in speaking. The imposition of English on the deaf can also be seen as an attempt to impose the majority cultural values on the minority group.

2.4 Development of PSE. PSE has developed as a result of this cultural clash. Communication is necessary for the interaction which takes place between deaf people and those hearing people who come into contact with them through their professional endeavors. This situation is reminiscent of the commercial relation existing between native and European in other settings. According to Barth, the interaction between members of separate ethnic groups is

structured so as to retain the boundary which separates them. To maintain the integrity of the deaf sub-culture as well as that of the dominant hearing culture, two rules promote the use of PSE as the medium of communication between deaf and hearing people: 1) within the deaf community, sign language diglossia specifies the use of the H form, or PSE, as the correct language variety to use with outsiders, and 2) the dominant culture, requires the use of its own language (or an approximation where the real thing is not feasible) in order to maintain its superiority.

PSE may be learned at almost any age by a deaf person, but there are social restrictions on who learns PSE at what time. It has been estimated that 10 per cent of the deaf population has deaf parents. A tiny proportion of these parents are highly educated and have native English competence. In this tiny minority of the deaf, PSE may be learned with ASL from infancy. Thus for these people PSE may be an incipient creole. For the majority of children from deaf parents, it is more likely that they will learn PSE as a second language from the formal interaction with hearing people and from association with educated deaf people in formal, i.e. English-mediated, situations.

Until recently, the majority of deaf children from hearing parents were not formally exposed to any sign variety until high school age. It was believed that any variety of signs would inhibit speech production. (All research studies on this topic show the

opposite, e.g., Stuckless and Birch 1966, Meadow 1966, Moores 1972.) Deaf children from hearing parents picked up ASL from deaf children with deaf parents, since ASL is preferred for informal conversations, and children mostly have informal conversations. PSE was then learned in some high school classrooms. Thus, until recently, for the majority of the deaf, PSE has been a second language, as is expected of a pidgin.

At the present time, the use of PSE is generally limited to formal occasions. For most deaf people the attempt to sign in PSE only remotely approaches the H variety of the diglossic continuum described by Stokoe (1970) and Woodward (1972). As the signing approaches PSE, ASL grammatical features are replaced by English grammatical markers and word order. The loss of ASL features sometimes decreases redundancy in the system without complete compensation by the introduction of redundancy via spoken language features. For example, the loss of suprasegmentals which in ASL are expressed by facial expressions and body movements, cannot be replaced by English suprasegmentals such as intonation, stress, and accent. PSE is no doubt sufficiently complex for communicative purposes, but it lacks the integrative and expressive functions of a natural language (Smith 1972). The deaf choose ASL over PSE as a vernacular language in spite of the former's low status.

It is sometimes claimed that PSE allows the deaf to acquire

English in a normal manner. This is analogous to claiming that knowledge of a spoken English-based pidgin is equivalent to competence in Standard English. What the deaf classify as PSE when signing among themselves often remains somewhat incomprehensible to hearing signers fluent in the H variety of signing. Looking at transcripts of deaf signers involved in PSE conversations, it becomes obvious that whatever their competence, it is a long way from Standard English.

3.0 Some Linguistic Characteristics of PSE. This section will discuss some grammatical and formational (phonological) characteristics of PSE. Because of the comparative recentness of linguistic interest in PSE (since 1973), the section is somewhat sketchy, but the reductions and hybridizations that characterize many pidgin languages have been noticed in PSE. Because of the great deal of variation we have observed in PSE and because of the complex nature of the Sign-to-English diglossic continuum of which PSE is a part, many of the linguistic characteristics are stated in terms of relative tendencies. The frequency of these tendencies have been shown to correlate with social variables in the case of those grammatical characteristics that have been studied in some depth, i.e., verb reduplication, negative incorporation, and agent-beneficiary directionality. It is probable that the other constructions discussed also are implicational and correlate with social variables.

It should be remembered that PSE comes from two quite different languages: ASL, a language channeled through the manual-visual modality, and English, a language channeled through the oral-aural modality. Deaf signers who learned signs before the age of six and especially those who had deaf parents, come from ASL backgrounds. These signers will retain more ASL structure in their PSE. Hearing signers normally approach PSE with an exclusive English base. However, because PSE is channeled through the manual-visual modality

like ASL, hearing signers cannot carry as much of their native language base into PSE, since linguistic information (especially phonological) from an oral language cannot be directly carried by a manual-visual channel.

The above situation leads to the result that normally the hearing person's PSE suffers much more reduction in structure than the deaf person's PSE. There is about the same amount of English reduction and admixture for both hearing and deaf signers' PSE. However, deaf PSE signing includes much more ASL redundancies than hearing PSE signing, which lacks most ASL redundancies.

3.1 Selected Grammatical Characteristics.

3.11 Progressive Aspect. Progressive aspect in ASL is represented by verb reduplication (Fischer 1972). Verb reduplication along the Sign-to-English diglossic continuum is ordered implicationally. Woodward (1973b) discussed an implicational scale for nine verbs that can take verb reduplication. Table 1 shows the implicational arrangement for these verbs. PSE would include lects on the bottom half of the implicational chart (approximately 6-10) in which verb reduplication is used in fewer environments. PSE also makes use of PSE uninflected copula or inflected forms plus a verb for Standard English be + ing. PSE, however, drops the redundant ing. Deaf people, people who have deaf parents, people who learned signs

before the age of six, and people who attended some college use more reduplication than people who do not have these characteristics.

Example 3: ASL HE DRIVE DRIVE DRIVE

PSE HE BE DRIVE DRIVE DRIVE

Eng He is driving

Example 4: ASL LESSON HE MEMORIZE MEMORIZE

PSE HE BE MEMORIZE the LESSON

Eng He is memorizing the lesson

Table 1. Verb Reduplication Implication

Lects	MEET	MEMORIZE	SEE	WANT	STUDY	READ	KNOW	RUN	DRIVE
1	+	+	+	+	+	+	+	+	+
2	-	+	+	+	+	+	+	+	+
3	-	-	+	+	+	+	+	+	+
4	-	-	-	+	+	+	+	+	+
5	-	-	-	-	+	+	+	+	+
6	-	-	-	-	-	+	+	+	+
7	-	-	-	-	-	-	+	+	+
8	-	-	-	-	-	-	-	+	+
9	-	-	-	-	-	-	-	-	+
10	-	-	-	-	-	-	-	-	-

3.12 Negative Incorporation. ASL has several verbs that may be negated by a bound, outward twisting movement of the moving hand(s) from the place where the sign is made. Verbs that undergo this transformation are implicationally ordered. Table 2 shows the implicational ordering for these verbs (Woodward 1974). PSE would include lects on the bottom half of the implicational chart (approximately 4-6) in which negative incorporation is used in fewer environments. Deaf signers use more negative incorporation than hearing signers.

Example 5: ASL ME NEG KNOW

PSE I NEG KNOW

Eng I don't know

Example 6: ASL ME NEG LIKE

PSE I NOT LIKE it

Eng I don't like it

Table 2. Negative Incorporation Implication

Lects	HAVE	LIKE	WANT	KNOW	GOOD
1	+	+	+	+	+
2	-	+	+	+	+
3	-	-	+	+	+
4	-	-	-	+	+
5	-	-	-	-	+
6	-	-	-	-	-

3.13 Agent-Beneficiary Directionality. ASL has a large number of verbs that express the relationship between agent and beneficiary by direction of movement in three dimensional space. The verb sign begins at the agent (or at a point in his direction) and moves to the beneficiary (or a point in his direction). Although directionality may be used for all three persons, only second-person-as-agent and first-person-as-beneficiary directionality has been studied in a dynamic framework. Verbs that may take agent-beneficiary directionality are also ordered implicationally. Table 3 shows the ordering of nine of these verbs. Again the bottom half (approximately lects 6-10) of the implicational chart represents more PSE-like signing, where some ASL directionality is kept, but most of it has been lost. Deaf persons, persons who learned signs before the age of six, and (deaf) persons who attended some college are more likely to use more directionality than hearing persons, persons who learned signs after the age of six, and (deaf) persons who attended no college.

Example 7: ASL SHOW
(Inward movement)

PSE YOU SHOW ME
(Inward movement)

Eng You show me

Example 8: ASL HATE
(Inward movement)

Example 8 (cont'd): PSE YOU HATE ME
(Outward movement
Citation form)

Eng You hate me

Table 3. Agent--Beneficiary Directionality Implication

Lects	FINGERSPELL	HATE	HIT	FORCE	SAY NO	ASK	TELL	SHOW	GIVE
1	+	+	+	+	+	+	+	+	+
2	-	+	+	+	+	+	+	+	+
3	-	-	+	+	+	+	+	+	+
4	-	-	-	+	+	+	+	+	+
5	-	-	-	-	+	+	+	+	+
6	-	-	-	-	-	+	+	+	+
7	-	-	-	-	-	-	+	+	+
8	-	-	-	-	-	-	-	+	+
9	-	-	-	-	-	-	-	-	+
10	-	-	-	-	-	-	-	-	-

3.14 Copula. ASL does not have a copula. PSE used by older people generally has an uninflected copula -- the ASL sign for true. More recently some new signs for English copula forms have been developed in the artificial Manual English systems. Some of these copula forms have been accepted in PSE. Presence of past tense copula forms in PSE implies presence of present tense forms.

Example 9: ASL GOOD HE

PSE HE BE (TRUE) GOOD

Eng He is good

Example 10: ASL DOCTOR HE

PSE HE IS A DOCTOR

Eng He is a doctor

3.15 Perfective Aspect. ASL has a perfective aspect marker FINISH. PSE also makes use of FINISH. In PSE the verb following FINISH remains uninflected (-en is deleted).

Example 11: ASL HE EAT FINISH

PSE HE FINISH EAT

Eng He has eaten

3.16 Articles. ASL does not have articles. PSE has variable use of articles that is probably conditioned by environments. For older and less educated users, articles are probably used less frequently. PSE has a sign for a and fingerspells the. The limited data that we have on written Deaf English has more quantitative use of the than a. However, it should be remembered that if Deaf English (Charrow 1974) is a written analog of PSE, it approaches Standard English more closely than signed varieties normally do. Therefore, written Deaf English should not necessarily correlate with signed

varieties of PSE; variable use of constructions in written Deaf English might be quite different quantitatively and possibly qualitatively from a conversational signed variety. (See Section 3.3.)

3.17 Plurality. ASL may pluralize concrete nouns by the addition of a free plural marker ALL-IN-A-ROW. Some of these nouns may also be pluralized by reduplication (with or without the plural marker). PSE retains some noun reduplication, probably in an implicational order, just as it retains some verb reduplication. PSE does not use the free ASL plural marker and does not have a marker to represent English s "plural". If the plural noun is emphasized, it can be fingerspelled.

Example 12: ASL THERE PERSON PERSON ALL-IN-A-ROW

PSE THERE BE MANY PERSON PERSON

Eng There are many people

3.18 Number Incorporation. In ASL numbers are often incorporated into the pronoun, e.g., WE-2, THEY-3. Most signers incorporate numbers from 1-5, although other signers can incorporate higher numbers. There are probably restrictions on when these higher numbers can be incorporated. Some deaf PSE signers may incorporate 1 and 2, but most PSE signers do not incorporate higher numbers into pronouns.

3.2 Selected Phonological Characteristics. Since PSE shares a number of the phonological characteristics of ASL and since many linguists may not be aware of some of the recent research in ASL phonology, we have included a short summary of this research.[4]

There is a level of sublexical structure in ASL analogous to but not dependent on phonological components of oral languages.

Stokoe (1960, 1965) in preliminary structural analyses of ASL phonology showed that sign phonemes could be classified into three major groups: tabs or places where signs are made, dezes or hand shapes used in making signs, and sigs or the motions involved in making signs. Bellugi (1972) using short term memory tests showed that sign phonemes were processed in the short term memory in the same way as oral phonemes. Battison, Friedman, Woodward, and Zambrano (reported in Woodward 1973a) attempted a feature analysis of places and hand shapes and postulated that a fourth parameter of orientation was needed to describe formational properties of signs adequately. Boyes (1973) approached a feature analysis of hand shapes from a developmental psycholinguistic point of view and has more recently worked with Lane (Lane, Boyes-Braem & Bellugi, 1976) on a feature analysis of hand shapes from tests of white noise visual interference on perception. Battison, Markowicz, and Woodward (1973) have shown that alternations among certain hand shapes involving the extension (newer form) or non-extension (older form)

of the thumb are describable in terms of an implicational scale and a variable rule with weighted phonological features. At the December, 1973 LSA meeting Battison (1974) discussed the state of the art in ASL phonology drawing especially on specific examples of the process of phonological deletion in ASL. At the same meeting Frishberg (1975) showed that ASL, like all natural languages, undergoes natural phonological changes over time.

3.21 Phonology of PSE. Previous research on PSE phonology appears to be non-existent. Battison, Markowicz, and Woodward (1973) have discussed certain gross overmarkings in artificial Manual English sign language systems, however, this overmarking is a result of poor language planning and does not appear in PSE, a natural pidgin language.

The limited data we have viewed on PSE phonology suggest an interesting relation and interaction between channels and codes (Hymes 1964, 1968). PSE is channeled through the manual-visual modality like ASL. The manual-visual channel cannot carry oral phonological information directly nor can the oral channel carry manual-visual phonological information directly. PSE, because it is channeled through the manual-visual modality, like ASL, has many more of the phonological characteristics of ASL than of English. PSE hand shapes (3.211) are basically the same as ASL. PSE places and movements (3.212) and suprasegmentals (3.213) are somewhat reduced for deaf signers and

greatly reduced for most hearing signers, who have little knowledge of ASL.

Influence from English phonology appears to be limited to fingerspelled words and "initial" signs, signs which have a hand shape that corresponds to the fingerspelled first letter of an English word. The influence from English phonology is thus quite indirect, since English phonology influences PSE only through the medium of orthography.

3.211 PSE Handshapes. PSE retains all of the hand shapes of ASL and does not have any additional hand shapes not found at the phonetic level in ASL. However, because of the influence of English phonology on initial signs in PSE, PSE makes some distinctions at the phonological level that are not made in ASL. A, T, and S; and G and D hand shapes are distinctive in PSE at the phonological level, while they are distinctive in ASL only on the phonetic level.

Example 13: ASL TRY, ATTEMPT, STRIVE (with either A or S handshape)

PSE ATTEMPT (with A hand shape)

STRIVE (with S hand shape)

Example 14: ASL TALL (with G hand shape)

PSE TALL (with G hand shape)

DEVELOPMENT (with D hand shape)

Although ASL also has initial signs and therefore some influence from English phonology, there is considerably more use of initial signs in PSE than in ASL. Because of this, there are also a larger number of signs using marked hand shapes (c.f. Boyes 1973, Battison 1974), e.g. R and T, in PSE than in ASL. Relative markedness of R and T hand shapes has no relation to English phonological marking, but only to the relative overall complexity of these hand configurations. R and T hand shapes require crossing of fingers, which is more complex than comparable hand shapes that do not require crossing. Chinese Sign Language does not appear to have either R or T hand shapes in native signs, and R and T hand shapes are learned comparatively late by children (Boyes 1973).

Although a number of signs with these relatively marked configurations have been introduced into PSE, natural phonological processes appear to be leveling out some of the marking. For example, many signs with R hand shapes are being produced with the thumb extended (Woodward and Erting 1975). Phonetically similar hand shapes like G and H have also been shown to be undergoing the same historical change (Battison, Markowicz, and Woodward 1973).

3.212 PSE Places and Movements. Although ASL hand shapes are not reduced in PSE phonology, places and movements are. Deaf PSE signers tend to keep a good deal of ASL places and movements, although these movements are generally smaller and more places

tend to be centralized than in ASL. Frishberg (1975) has pointed out that centralization is one strong process in ASL phonological change. She states: "The center of the signing area seems to be the hollow of the throat. Signs move down the face, in from the side of the body and up from near the waist level." (Frishberg 1975, p8)

For hearing PSE signers, centralization is extreme. Signing space is limited as much as possible to the area from just above the eyebrows to the upper chest. Lateral movement is restricted even more, so that hands rarely move beyond the shoulders.

While centralization is a natural historical process in ASL and probably in other natural sign languages as well, extreme centralization is viewed negatively by a number of deaf people. Some ASL signers have a derogatory sign that suggests mumbling for people who sign with extremely restricted places and movement.

3.213 Suprasegmental Phonology. Intonation is distinctive at the phonological level in ASL. Facial expression in true sign languages like ASL serves an analogous function to intonation in oral languages. For example, change in facial expression can convey a change from statement to question. In PSE, the use of facial expression is restricted. Deaf signers who use PSE will use facial expression more than hearing signers who are often said to sign without expression.

Unlike ASL, in PSE facial expression is not distinctive at the phonological level. Changes from statements to questions are signaled by an English question word, English word order, or a sentence final question marker. Facial expression may accompany these, especially among deaf signers, but it will never totally and singly signal a question. Similarly, other ASL facial expressions, e.g., facial negation, may be used by deaf signers signing PSE, but these also are not distinctive at the phonological level.

English intonation cannot be directly conveyed in PSE because of the incompatability of the visual channel to carry such oral information.

3.3 PSE and Written Deaf English. Thus far PSE has only been discussed as a language variety that is signed. Charrow (1974) has suggested that written (Non-standard) Deaf English is PSE's "written analog, but is closer to Standard English in the continuum." (p56) Because of the limitations of the written channel, Deaf English cannot express certain purely ASL constructions, such as directionality in three dimensional space. There is a great deal of grammatical variation and also "elimination of number, gender, tense markers and other essentially redundant features." (p50) Such constructions in Deaf English as variable use of articles and copulas indicate further similarities between Deaf English and PSE.

Along with this reduction and admixture in grammatical structure is a socially restricted use and an apparent lack of registers. This apparent lack of registers may be due more to the social limitations of a written channel than to the pidginization process. PSE, while socially restricted, appears to have registers based on formality. This variation, however, may occur mostly for people who have more of a creole than a pidgin Sign English.

It is impossible to know at this time the exact relation of PSE and written Deaf English. However, Charrow's hypothesis seems quite reasonable and worthy of further investigation.

4.0 Pidgin Sign Languages and Linguistic Theory. In the preceding sections we have discussed some of the sociological and linguistic characteristics of PSE. The variation and dynamism observed in PSE is describable in terms of recent developments in variation theory (Bailey 1974). PSE while having some unique salient characteristics, e.g. Agent-Beneficiary Directionality, appears to have characteristics that may be considered to be substantive (Samarin 1971) for pidgins. Probably substantive characteristics include reduction (Samarin 1971) and admixture and restricted inter-group use (Hymes 1971).

4.1 Reduction and Admixture. Reduction and admixture of ASL and English can be seen from all the grammatical and most of the phonological

characteristics in section 3.0. One exception is PSE hand shapes which are phonologically more complex than ASL hand shapes.

Some reduction and admixture, e.g. progressive aspect, can be seen as paralleling simplification in oral language pidgins. Reduplication and the use of a copula and a verb to represent progressive aspect can be found in oral languages. Implicationally ordered variation of these constructions would be as expected in an oral as in a sign pidgin.

Other reductions and admixtures appear to be due more to the incompatibility of the oral and manual channels than to the pidginization process. This seems especially to be true in the area of phonology. English suprasegmentals cannot be carried through a manual-visual channel. Thus, as we have seen, there is more reduction and less admixture in phonology than in grammar. Deaf PSE signers are able to keep ASL suprasegmentals, while hearing PSE signers cannot keep English suprasegmentals (or for that matter segmentals) because of channel incompatibility, and they cannot utilize ASL suprasegmentals because they are effectively culturally isolated from the deaf community. This situation appears to be unique to pidgin sign languages arising from contact between a true sign language and an oral language.

4.2 Restricted Inter-Group Use. Hearing signers, unless they are born of deaf parents and native signers will undoubtedly prefer English for all types of communication. Most deaf signers use

ASL for communicative, integrative, and expressive levels of communication with other deaf people.

Interaction between hearing and deaf people is many times limited to a purely communicative level. Different cultural values and beliefs as well as language differences effectively hinder if not bar integrative and expressive communication and interaction between most members of both groups.

Deaf people are hindered from total integration into hearing society not only because of their deafness but also because of the predominant attitudes of abnormality and pity that many hearing people have towards deaf people. Hearing people are often prevented from being acculturated into the deaf community because of language differences as well as the diglossic situation that insures that most deaf people will move towards English immediately after they discover a person is hearing, even if they had been signing ASL before. In addition to this language situation, there is a strong feeling of group solidarity in deaf communities. This solidarity, which is often coupled with a distrust of hearing people, is extremely hard for a complete outsider to pierce.

PSE allows communication between these two groups, but, perhaps more importantly, it helps the deaf community maintain its identity, since it does not allow extensive integrative and expressive communication between hearing and deaf communities. This helps

prevent significant intrusions of the dominant hearing language and values into the deaf community.

While Woodward (1973d) stated that PSE might be short-lived as a number of other pidgins, it appears that this is erroneous in light of the previous discussion. ASL helps the individual to maintain identity as a member of the deaf subculture. PSE fosters development of the subculture with minimal long-term cultural interference from the hearing community. With such a vital function, it is extremely doubtful that PSE will be short-lived unless a better substitute for maintenance of cultural boundaries and therefore promulgation of cultural traditions is found.

NOTES

1. This is a draft of a paper to be presented at the 1975 International Conference on Pidgin and Creole Languages to be held in Honolulu, Hawaii, Jan. 6-11, 1975. The production of this paper was supported in part by NSF Research Grant

2. We regret that the scope of this paper does not allow time for a discussion of pidgin sign languages in other countries nor of other possible U.S. pidgin sign languages, e.g. Childrenese (Cokely and Gawlik 1974).

3. We have chosen not to use Stokoe's (1960) transcription system, since most readers will not be familiar with it. Glosses for signs are written in all caps. Hyphens between the glosses indicate that all the words translate the one sign, not that there are morphemes present in the sign for each of the glosses. Glosses written in a column indicate morphemes that are produced simultaneously in one sign. Fingerspelled words are in small letters and underlined.

4. This section is taken from Woodward and Erting, 1974.

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